

TENNESSEE AIR POLLUTION CONTROL BOARD  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
NASHVILLE, TENNESSEE 37243-1531

Knowville  
FEB 21 2008



**OPERATING PERMIT (Conditional Major) Issued Pursuant to Tennessee Air Quality Act**

Date Issued: February 15, 2008

Permit Number:  
461613P

Date Expires: February 1, 2018

Issued To:  
Shawmut Advanced Material Solutions

Installation Address:  
325 J.D. Yarnell Ind Pkwy  
Clinton

Installation Description:  
Textile Production  
Natural gas-fired flame laminators  
A pinhole dye tester with each laminator

Emission Source Reference No.  
01-0234-01, 02, 03

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated December 20, 2007 and are signed by Justin Keppy, Vice President of Operations for the permitted facility. If this person terminates employment or is assigned different duties and is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(conditions continued on next page)

*Gary R. Stephens*

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE

POST AT INSTALLATION ADDRESS

2. The permittee has elected to opt-out of being issued a major source operating permit pursuant to Division Rule 1200-3-9-.02(11)(a). The permittee would be considered a major source because their "potential to emit" value for a single hazardous air pollutant was greater than 10 tons per year, at the time of application. The permittee has agreed to be subject to limitations in order to be below the major source applicability threshold for a single hazardous air pollutant of 10 tons per year.
3. Any non-compliance with any condition(s) of this permit set to restrain the "potential to emit" below the applicability thresholds of 1200-3-9-.02(11) of the Tennessee Air Pollution Control Regulations shall be reported in writing to the Technical Secretary within fifteen(15) working days of such discovery. This notification, at a minimum, shall include the identification of the source, identification of the permit condition(s) violated, and details of the violation.
4. The permittee is placed on notice that conditions 6 and 7 of this operating permit contain limitations that allow the permittee to opt out of the major source operating permit program requirements specified in Division Rule 1200-3-9-.02(11). Failure to abide by this limit will not only subject the permittee to enforcement action by the state of Tennessee, but it may also result in the imposition of Federal enforcement action by the United States Environmental Protection Agency and the loss of being Federally recognized as a conditional major source.
5. Visible emissions from the sources in this permit shall not exceed twenty (20) percent opacity except for one six minute period per one (1) hour or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6 minute average).
6. Volatile organic compounds (VOC) emitted from this facility shall not exceed 24.0 tons during all intervals of twelve consecutive months.
7. Emissions of any hazardous air pollutant (HAP) listed in Section 112 of the Federal Clean Air Act shall not exceed 15.30 pounds per hour of HCL on a monthly average basis and 9.0 tons during all intervals of 12 consecutive months. Emissions of any combination of HAPs shall not exceed 24.0 tons during all intervals of 12 consecutive months.
8. Should proof of compliance for the pollutant(s) with emission limitations placed on this permit be required, the emissions measuring test methods and procedures are the following:

<i>Pollutant or Parameter</i>	<i>Testing Methodology</i>
Particulate Matter	EPA Method 5 as published in the current 40 CFR 60, Appendix A
Volatile Content of the Surface Coatings	EPA Method 24 as published in current 40 CFR 60, Appendix A
Hydrochloric Acid	EPA Method 26 as published in the current 40 CFR 60, Appendix A

9. A record of purchase orders and invoices for all VOC and HAP containing materials must be maintained and kept available for inspection by the Technical Secretary or his representative. This record must be retained for not less than five years.
10. The as-supplied VOC content of all VOC-containing materials to be used by this new source shall be determined as follows:

All Coatings, Inks, Adhesives, Thinners, and Solvents - from Material Safety Data Sheets (MSDS) or manufacturer or vendor formulation data which explicitly list the VOC content by weight.

The results of these determinations shall be compiled in the following tabular format or an alternative format which readily provides the same required information. This table, along with MSDS or other supporting documentation for each material to be used, shall be maintained at the source location and made available for inspection by the Technical Secretary or his representative, beginning within 180 days of initial start-up. If new materials are used, or if material formulation is changed, the table shall be updated within 90 days from the initial date of usage of the new or altered material.

Process Material Description	Material Density (lb/gal)	VOC Content (lb/gal)
Material #1		
Material #2		
etc.		

11. The permittee shall calculate the actual quantities of VOC and HAPs emitted from this facility during each calendar month and maintain records of these emissions in a form that readily shows compliance with conditions 6 and 7 of this permit. (See example below) This log must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

Log 1 (monthly emissions from the laminators) Month \_ Year \_

Product input (yards per month)	Foam Type (Ester FR, Ester NFR, Ether FR, Ether NFR)	2 ply/3 ply	Emission factor for PM (lbs per yard)	Emission factor for HCL (lbs per yard)	Operating hours	PM emissions Per month	HCL emissions per month
Total							

Log 2 (VOCs and HAPs from other operations at the facility) Month \_ Year \_

Process Material	Usage gal/mo	VOC Content lb/gal	VOC Emitted ton/mo	HAP #1 Content lb/gal	HAP #1 Emitted ton/mo	HAP #2 Content lb/gal	HAP #2 Emitted ton/mo	Total HAP Content lb/gal	Total HAPs Emitted ton/mo

Log 3 (12 consecutive month summary)

Month/year	HCL emissions	12 consecutive month total	VOC emissions	12 consecutive month total
January 2008				
February 2008				
Etc.				

12. Regarding recordkeeping of logs, the following is applicable:

- For sources required to maintain monthly logs:  
All data, including all required calculations, must be entered in the log no later than thirty (30) days from the end of the month for which the data is required.
- For sources required to maintain weekly logs:  
All data, including all required calculations, must be entered in the log no later than seven (7) days from the end of the week for which the data is required.

(c) For sources required to maintain daily logs:

All data, including all required calculations, must be entered into the log no later than seven (7) days from the end of the day for which the data is required.

13. A report stating the compliance status of this source or facility with permit conditions 6 and 7 shall be submitted by March 31 of every year starting in 2008. This report shall cover the preceding calendar year from the day of permit issuance, and shall include the records required by condition 11. This report shall be mailed to the following address:

Knoxville Environmental Field Office  
Division of Air Pollution Control  
3711 Middlebrook Pike  
Knoxville, TN 37921

14. The permittee shall apply for renewal of the permit for this facility within 60 days of expiration of this permit.

## SECTION II: SOURCE SPECIFIC CONDITIONS

01-0234-01: Natural gas fired flame laminator used for textile production. A natural gas fired laminator used to melt the surface of flexible foam so that fabrics, films and non-wovens can be attached to it, creating a 3-ply laminated textile product. The unit will be equipped with two natural gas burners and a local ventilation system consisting of an overhead hood ducted to a roof-mounted blower which exhausts through a stack.

15. Only natural gas shall be used as fuel for this source.
16. Particulate matter emitted from this source shall not exceed 5.27 pounds per hour based on a monthly average.
17. Hydrochloric acid emissions shall not exceed 5.10 pounds per hour based on a monthly average.
18. The Hydrogen Chloride (HCl) exhaust gases from the three N.G.-fired laminator stacks shall be discharged unobstructed vertically upwards to the ambient air from each stack with an exit diameter of 2.33 feet not less than 46.0 feet above ground level.

01-0234-02: Natural gas fired flame laminator used for textile production. A natural gas fired laminator used to melt the surface of flexible foam so that fabrics, films and non-wovens can be attached to it, creating a 3-ply laminated textile product. The unit will be equipped with two natural gas burners and a local ventilation system consisting of an overhead hood ducted to a roof-mounted blower which exhausts through a stack.

19. Only natural gas shall be used as fuel for this source.
20. Particulate matter emitted from this source shall not exceed 5.27 pounds per hour based on a monthly average.
21. Hydrochloric acid emissions shall not exceed 5.10 pounds per hour based on a monthly average basis.
22. The Hydrogen Chloride (HCl) exhaust gases from the three N.G.-fired laminator stacks shall be discharged unobstructed vertically upwards to the ambient air from each stack with an exit diameter of 2.33 feet not less than 46.0 feet above ground level.

01-0234-03: Natural gas fired flame laminator used for textile production. A natural gas fired laminator used to melt the surface of flexible foam so that fabrics, films and non-wovens can be attached to it, creating a 3-ply laminated textile product. The unit will be equipped with two natural gas burners and a local ventilation system consisting of an overhead hood ducted to a roof-mounted blower which exhausts through a stack.

23. Only natural gas shall be used as fuel for this source.
24. Particulate matter emitted from this source shall not exceed 5.27 pounds per hour based on a monthly average.
25. Hydrochloric acid emissions shall not exceed 5.10 pounds per hour based on a monthly average.
26. The Hydrogen Chloride (HCl) exhaust gases from the three N.G.-fired laminator stacks shall be discharged unobstructed vertically upwards to the ambient air from each stack with an exit diameter of 2.33 feet not less than 46.0 feet above ground level.

End of conditions

# CURRENT EMISSIONS REQUIREMENTS AND EMISSION SUMMARY

1. EMISSION SOURCE REFERENCE NUMBER: 01 - 0234 - 01 NONATTACHMENT: X ATTAINMENT: 2 LOG # 461613

3A. PERMIT STATUS:

NEW RENEWAL RELOCATION 3B. PREVIOUS PERMIT NUMBER: 961044P OPERATING: CONSTRUCTION

4. IDENTIFY IF ONLY A PART OF THE SOURCE IS SUBJECT TO THIS REQUIREMENT	5. POLLUTANT	6. APPLICABLE REQUIREMENT(S): TN AIR POLLUTION CONTROL REGULATIONS, 40 CFR, PERMIT RESTRICTIONS, AIR QUALITY BASED STANDARDS	LIMITATION	8. MAXIMUM ACTUAL EMISSIONS			9. MAXIMUM ALLOWABLE EMISSIONS	
				IN UNITS OF ITEM 7	POUNDS / HOUR	TONS / YEAR	POUND S / HOUR	TONS / YEAR
	TSP	1200-3-7-03(table 2)	8 lbs/hr				15.8	69.24
	VOC	1200-3-7-07(2)	0 tpy					24.0
	HAP	1200-3-9-02(11) (a)	0 tpy combined					24.0
			0 tpy HCL(single)					9.0
	OPACITY	1200-3-5-01(1) 1200-3-5-03(6)	% Method 9					
				SOURCE OF DATA FOR EMISSIONS IN ITEM 8:				

IF THIS IS NOT A TITLE V SOURCE, IS THIS A DEFERRED SOURCE (SUBJECT TO NESHAPS OR A SYNTHETIC MINOR SOURCE)?

IF THE ANSWER IS YES, EXPLAIN:

ENGINEERING: SKS DATE: 02/12/08 SUPERVISOR: DATE: SPECIALIST